QUALITY ASSURANCE/QUALITY CONTROL
SM 6020B 20th- 21st Editions

Facility Name: _____ LAB ID: _____

Assessor Name: _____ Analyst Name: _____ Inspection Date: _____

Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
Calibration					
(1) Did the initial calibration include at least 5 non-zero standards including one standard at or below the MRL?	SM6020.B.1a				
(2) Was the concentration of the lowest standard at the reporting level?	SM6020.B.1a				
(3) Were calibration concentrations chosen with no more than one order of magnitude between concentrations?	SM6020.B.1a				
(4) If response factors or calibration factors were used, was the relative standard deviation for each analyte ≤20%?	SM6020.B.1a				
(5) If linear regression was used, was the correlation coefficient >0.995?	SM6020.B.1a				
(6) Was each calibration point recalculated and compared to the curve?	SM6020.B.1a				
(7) Were the recalculated values verified to be within ± 20%?	SM6020.B.1a				
(8) Was continuing calibration verification performed after every 10 samples for GC analysis, after every 20 samples for GC/MS analysis, or every 12 hours, whichever was more frequent?	SM6020.B.1b				
(9) Did the continuing calibration verifications meet acceptance criteria of ±20% of the known or expected value of the calibration standard?	SM6020.B.1b				
(10) Was each analytical batch finished with a laboratory fortified blank (LFB) or a closing standard to demonstrate that performance was still acceptable for the last sample?	SM6020.B.1b				

Comments/Notes:

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Initial Quality Control					
(11) Prior to the analysis of any sample, was an initial demonstration of capability—consisting of a laboratory reagent blank (LRB) and a minimum of four LFBs at a concentration between 5 x MRL and the midpoint of the calibration curve perfomed?	SM6020.B.2.a				
(12) Prior to the analysis of any sample, was the Method Detection Limit (MDL) determined as described in Section 1030C or other specified procedure?	SM6020.B.2.b				
(13) Were the MDL samples analyzed over a 3 to 5 day period?	SM6020.B.2.b				
(14) Did the MDL determinations include all applicable sample preparatory techniques?	SM6020.B.2.b				
(15) Was the MDL determined at least annually?	SM6020.B.2.b				
(16) Was the Minimum Qualntitation Level (MQL) defined as 4 x MDL?	SM6020.B.2.c				
(17) When compounds of interest were detected at levels below the MQL were results <[MQL]?	SM6020.B.2.c				
(18) When compounds of interest were observed at levels below the MDL, were results reported as ND (not detected)?	SM6020.B.2.c				
(19) Were sample sets or batches defined as the number of samples extracted in a single day, not exceeding 20 samples per set?	SM6020.B.2.e				
(20) Was an analytical day defined as a 12-hour analytical period?	SM6020.B.2.f				
Batch Quality Control					
(21) Was a minimum of 1 method blank, carried throughout the entire preparatory and analytical procedure, analyzed with each sample batch?	SM6020.B.3.a				

Comments/Notes:

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(22) Were no analytes of interest present in the method blank at levels greater than one fourth the MQL?	SM6020.B.3.a				
(23) Was at least one LFB, spiked at a concentration at least 5 x MQL or at the mid-point of the curve, analyzed with each sample batch?	SM6020.B.3.b				
(24) Did the LFB meet the acceptance criteria stated in the method?	SM6020.B.3.b				
(25) Were control charts plotted and recovery limits for the LFB calculated as described in SM 1020B?	SM6020.B.3.b				
(26) Was an internal standard used to monitor retention time, relative response, and quantity of analytes in each sample?	SM6020.B.3.c				
(27) Was the internal standard added to each standard and sample/extract just before sample analysis?	SM6020.B.3.c				
(28) Was internal standard response within ±30% compared to calibration curve response?	SM6020.B.3.c				
(29) Was a surrogate standard added to each sample and method blank prior to sample preparation/analysis per the method ?	SM6020.B.3.d				
(30) Was an externally generated quality control sample (QCS) analyzed at least quarterly or whenever new stock solutions were prepared?	SM6020.B.3.e				
(31) Was at least one Laboratory-Fortified Sample (LFS) analyzed with each sample set?	SM6020.B.3.f				
(32) Was the LFS fortified at a concentration at least 5 times the MQL?	SM6020.B.3.f				
(33) Was at least one duplicate LFS (LFSD) analyzed with each sample set?	SM6020.B.3.g				
(34) If the sample volume collect was not sufficient to analyze LFS/LFSD, was a second sample LFS analyzed?	SM6020.B.3.g				
(35) Were sample batch acceptance results based on LFBs rather than LFSs because sample matrices may interfere with method performance?	SM6020.B.3.f				

Comments/Notes: